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Testimony with regard to HB 6524 An Act Concerning Building Code Adoption and Duties of Building Officials, Submitted to Committee of Public Safety and Security.

Senator Hartley, Representative Dargan and members of the Public Safety and Security Committee. My Name is Dwight Carlson I have been installing electrical equipment in residential, commercial and industrial application for almost 30 years. I have a Masters Electrician License (E1- Electrical Contractor Unlimited) with the Connecticut Department of Consumer Protection and an Electrical Inspectors license with the Department of Construction Services which I have held for 12 years. I am sending this testimony to support HB 6524 An Act Concerning Building Code Adoption and Duties of Building Officials. Of particular interest in this Bill is the requirement for Building Officials *"to ensure that inspections are done by the appropriate licensed inspectors"*. The reason for the additional language in this Bill is the result of individuals with a BO and ABO license issued by the Department of Construction Services not having the qualifications/experience to inspect the installations of electrical, plumbing, HVAC, etc.

Currently, more prevalent in smaller municipalities, the BO or ABO are conducting inspections in our places of employment, schools, homes, apartments, hospitals, nursing homes, places of assembly, etc. for CT State Building Code compliance without having a background or expertise in that trade or craft as regulated by CT State Regulation 29-262-1(b)- 11(b). The issue is that the Building Official and/or Assistant Building Official inspecting the work regulated by CGS 29-263 may not has the expertise in that discipline or craft to ensure that the contractor has correctly installed that equipment.

The bill will draw attention to this hopefully ensuring that the individuals are duly qualified to make these inspections in the interest of public safety. This is a brief explanation to a complex problem

The Misapplication;

Each municipality is required to appoint a Building Official and an enforcement agency (1) that is responsible for administering the code.

Section 104.4(5) of the International Building Code 2003 requires the BO to *"make all of the required inspections"* or *".....accept reports of inspection by approve agencies or individuals"*. Currently any individual with an Assistant Building Official license or a Building Official license is conducting these inspections. The code requires that the **Building Official** (as defined by CGS 29-260) *"make all of the required inspections"*, it does not however indicate that any individual with a BO or ABO license working for the **Building Official** (as defined by CGS 29-260) conduct these inspections. Furthermore, it does allow the BO to *"accept reports of inspection by approved agencies or individuals"*. By definition of Chapter 2 of the IBC, an *"approved agency"* (12) redirects you to Section 1702.1 (14) of the IBC which has been amended by the 2005 CT Supplement as *"an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved"*.

The other concern that I would like to highlight is the required qualifications for the Building Official and Assistant Building Official. I would like to draw your attention to the fact that these two positions require 5 years experience in construction for a BO and 3 years construction experience for an ABO(as defined by CGS 29-261) (2) . Additionally these positions require the individuals to *"be generally informed on the quality and strength of building materials, on the accepted requirements of building construction, on the accepted requirements of design and construction relating to accessibility to and use of buildings by the physically disabled, on good practice in fire prevention, on the accepted requirements regarding light and ventilation, on the accepted requirements for safe exit facilities and on other items of equipment essential for the safety, comfort and convenience of occupants and shall be certified under the provisions of section CGS 29-262"*. After reviewing this information review the minimum qualifications for the Electrical Inspector, Plumbing Inspector, Heating and Cooling Inspector, Mechanical Inspector, you will notice that they require a minimum of 6 years in their respective trade. The danger in this is that the individual with a BO and/or ABO responsible to ensure that the installation meets or exceeds the minimum standards knows, in most cases, less than the individual installing the equipment. The system that has been established to provide us with a degree of safety, has also provided us the façade that our dwellings, apartments, nursing homes, places of employment, etc. are safe.

Below you will find the statutory and regulatory routing from which I have drawn my testimony. Due to obvious time constraints it would be best to review this information as your schedule allows.

Feel free to contact me at any time for additional detailed information.

Regards,

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1. **CGS §Sec. 29-260 Municipal building official to administer code.** (a) *The chief executive officer of any town, city or borough, unless other means are already provided, shall appoint an officer to administer the code for a term of four years and until his successor qualifies and quadrennially thereafter shall so appoint a successor. Such officer shall be known as the building official. Two or more communities may combine in the appointment of a building official for the purpose of enforcing the provisions of the code in the same manner. The chief executive officer of any town, city or borough, upon the death, disability, dismissal, retirement or revocation of licensure of the building official, may appoint a licensed building official as the acting building official for a single period not to exceed one hundred eighty days.*
2. **CGS §29-261** *The building official, to be eligible for appointment, shall have had at least five years' experience in construction, design or supervision and assistant building officials shall have had at least three years' experience in construction, design or supervision, or equivalent experience as determined by the Commissioner of Public Safety. They shall be generally informed on the quality and strength of building materials, on the accepted requirements of building construction, on the accepted requirements of*

*design and construction relating to accessibility to and use of buildings by the physically disabled, on good practice in fire prevention, on the accepted requirements regarding light and ventilation, on the accepted requirements for safe exit facilities and on other items of equipment essential for the safety, comfort and convenience of occupants and shall be certified under the provisions of section CGS 29-262",*

3. **CGS §Sec. 29-262** *The State Building Inspector and the Codes and Standards Committee acting jointly, with the approval of the Commissioner of Public Safety, shall require passage of a written examination and successful completion of a suitable educational program of training as proof of qualification pursuant to section 29-261 to be eligible to be a building official. No person shall act as a building official for any municipality until the State Building Inspector, upon a determination of qualification, issues a license to such person except that a license shall not be required (1) in the case of a person certified prior to January 1, 1984, or (2) in the case of a provisional appointment, for a period not to exceed ninety days in order to complete such training program and licensure classes, made in accordance with standards established in regulations adopted by the State Building Inspector and the Codes and Standards Committee in accordance with the provisions of chapter 54. The State Building Inspector and the Codes and Standards Committee, with the approval of the Commissioner of Public Safety, shall adopt regulations, in accordance with chapter 54, to (A) establish classes of licensure that will recognize the varying complexities of code enforcement in the municipalities within the state, and (B) require continuing educational programs for each such class that shall include basic requirements for each such program and a system of control and reporting. Any licensed or certified building official or inspector who wishes to retire his or her license or certificate may apply to the office of the State Building Inspector to have such license or certificate retired and be issued a certificate of emeritus. Such retired official or inspector may no longer hold himself or herself out as a licensed or certified official or inspector.*

#### 4. **IBC 2003**

5. **104.4 Inspections.** *The building official shall make all of the required inspections, or the building official shall have the authority to accept reports of inspection by approved agencies or individuals. Reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The building official is authorized to engage such expert opinion as deemed necessary to report upon unusual technical issues that arise, subject to the approval of the appointing authority.*

#### 6. **(Add) SECTION 103 – ENFORCEMENT AGENCY**

7. **(Add) 103.1 Creation of enforcement agency.** *Each town, city and borough shall create an agency whose function is to enforce the provisions of this code. The official in charge thereof shall be known as the building official.*
8. **(Add) 103.2 Appointment.** *The chief executive officer of any town, city or borough shall appoint an officer to administer this code, and this officer shall be known as the "building official" in accordance with section 29-260 of the Connecticut General Statutes, and referred to herein as the building official, local building official or code official.*
9. **(Add) 103.3 Employees.** *In accordance with the prescribed procedures and regulations of the town, city or borough, and with the concurrence of the appointing authority, the building official shall have the authority to appoint an assistant building official, related technical officers, inspectors, plan examiners and other employees. Such employees shall have the powers as regulated by the town, city or borough, and by the State of Connecticut.*

#### 10. **202 Definitions**

11. **APPROVED.** *Acceptable to the building official.*

12. **APPROVED AGENCY.** *See Section 1702.1.*

13. (Add) **1702.1.1 Definitions.** Amend the following definitions:

14. (Amd) **APPROVED AGENCY.** An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when such agency has been approved. Officials certified in accordance with the provisions of section 29-298 of the Connecticut General Statutes, and employed by the jurisdiction in which the building or structure is being constructed, shall be considered an approved agency for the portions of this code also regulated by the 2005 Connecticut State Fire Safety Code.

**Sec. 29 - 262 - 1b. Classes of licensure**

The classes of licensure are as follows:

1. Building official
2. Assistant building official
3. Residential building inspector
4. Plan review technician
5. Mechanical inspector
6. Electrical inspector
7. Plumbing inspector
8. Heating and cooling inspector
9. Construction inspector

**Sec. 29-262-4b. Assistant building official duties and minimum qualifications**

(a) The duties and minimum qualifications of an assistant building official are set forth in subsection (a) of section 29-261 of the Connecticut General Statutes.

(b) Each assistant building official shall attend a minimum of ninety (90) hours of approved continuing education programs over consecutive three-year periods.

**Sec. 29-262-5b. Residential building inspector duties and minimum qualifications**

(a) The residential building inspector performs the following duties under the direction of the building official or the assistant building official:

- (1) Reviews, analyzes and evaluates preliminary and final construction plans of one- and two-family detached dwellings and one-family townhouses and their accessory structures for compliance with applicable codes adopted as a portion of the State Building Code, referenced standards and other related regulations prior to the issuance of building permits;
- (2) Passes upon any question relative to the mode, manner of construction or materials to be used in the erection, repair, addition or alteration of one- and two-family detached dwellings and one-family townhouses and their accessory structures pursuant to the provisions of applicable codes adopted as a portion of the State Building Code and in accordance with regulations adopted by the Department of Public Safety;
- (3) Requires compliance with applicable codes adopted as a portion of the State Building Code; with all regulations lawfully adopted thereunder; and with laws relating to the construction, repair, addition, alteration, removal, demolition, integral equipment, location, use, occupancy and maintenance of one- and two-family detached dwellings and one-family townhouses and their accessory structures, except as may otherwise be provided;
- (4) Explains applicable codes and standards to contractors, architects, developers, engineers, property owners and other interested parties; and
- (5) Enforces the correction of violations of applicable codes and standards at the scene of the installation by dealing directly with building owners, agents and contractors to achieve compliance with such codes, referenced standards and other related regulations.

(b) The minimum qualifications of a residential building inspector are as follows:

- (1) Completion of high school, vocational school or the equivalent;
- (2) Possession of least five (5) years of experience in the construction, design or supervision of the construction of one- and two-family detached dwellings and one-family townhouses;
- (3) Be generally informed regarding the quality and strength of building materials, the accepted requirements of building construction, the accepted requirements for light and ventilation, the accepted

requirements -- for safe exit facilities and other items of equipment essential for the safety, comfort and convenience of occupants of one- and two-family detached dwellings and one-family townhouses and their accessory structures; and

(4) Demonstration of the following:

(A) Ability to read and interpret plans and specifications of one- and two-family detached dwellings and one-family townhouses and their accessory structures;

(B) Ability to recognize faulty construction and unsafe conditions in new and existing one- and two-family detached dwellings and one-family townhouses and their accessory structures; and

(C) Ability to express oneself clearly and concisely both orally and in writing

(c) Each residential building inspector shall attend a minimum of sixty (60) hours of approved continuing education programs over consecutive three-year periods.

#### **Sec. 29-262-5b. Residential Building Inspector**

(a) The residential building inspector performs the following duties under the direction of the building official or the assistant building official:

(1) Reviews, analyzes and evaluates preliminary and final construction plans of one and two family detached dwellings and one family townhouses and their accessory structures for compliance with applicable codes adopted as a portion of the State Building Code, referenced standards and other related regulations prior to the issuance of building permits;

(2) Passes upon any question relative to the mode, manner of construction or materials to be used in the erection, repair, addition or alteration of one - and two - family detached dwellings and one - family townhouses and their accessory structures pursuant to the provisions of applicable codes adopted as a portion of the State Building Code and in accordance with regulations adopted by the Department of Public Safety;

(3) Requires compliance with applicable codes adopted as a portion of the State Building Code; with all regulations lawfully adopted thereunder; and with laws relating to the construction, repair, addition, alteration, removal, demolition, integral equipment, location, use, occupancy and maintenance of one and two family detached dwellings and one family townhouses and their accessory structures, except as may otherwise be provided;

(4) Explains applicable codes and standards to contractors, architects, developers, engineers, property owners and other interested parties; and

(5) Enforces the correction of violations of applicable codes and standards at the scene of the installation by dealing directly with building owners, agents and contractors to achieve compliance with such codes, referenced standards and other related regulations.

(b) The minimum qualifications of a residential building inspector are as follows:

(1) Completion of high school, vocational school or the equivalent;

(2) Possession of least five (5) years of experience in the construction, design or supervision of the construction of one and two family detached dwellings and one family townhouses; of occupants of one and two family detached dwellings and one family townhouses and their accessory structures; and

(4) Demonstration of the following:

(A) Ability to read and interpret plans and specifications of one - and two - family detached dwellings and one - family townhouses and their accessory structures;

(B) Ability to recognize faulty construction and unsafe conditions in new and existing one - and two family detached dwellings and one - family townhouses and their accessory structures; and

(C) Ability to express oneself clearly and concisely both orally and in writing

(c) Each Residential Building Inspector shall attend a minimum of sixty (60) hours of approved continuing education programs over consecutive three - year periods.

#### **Sec 29-262-6b Plan Review Technician**

(a) The plan review technician performs the following duties under the direction of the building official or the assistant building official:

(1) Reviews, analyzes and evaluates preliminary and final construction plans for compliance with all applicable codes, referenced standards and other related regulations prior to the issuance of building permits;

- (2) Explains codes and standards to contractors, architects, developers, engineers, property owners and other interested parties;
- (3) Provides assistance to inspectors for correct interpretation of plans and codes of a difficult and complex nature; and
- (4) Prepares and maintains reports, records and correspondence relating to the review of plans.
- (b) The minimum qualifications of a plan review technician are as follows:
  - (1) Completion of high school, vocational school or the equivalent;
  - (2) Possession of three (3) years of experience in the fields of building construction or code interpretation or enforcement; and
  - (3) Demonstration of the following:
    - (A) Thorough knowledge of applicable codes, referenced standards and other regulations;
    - (B) Ability to read and interpret plans and specifications;
    - (C) Knowledge of building construction materials and the principles, practices and methods of building design;
    - (D) Ability to examine and make recommendations on plans submitted for approval; and
    - (E) Ability to express oneself clearly and concisely, both orally and in writing.
- (c) Each Plan Review Technician shall attend a minimum of ninety (90) hours of approved continuing education programs over consecutive three - year periods.

**Sec. 29-262-7b. Mechanical Inspector**

- (a) The mechanical inspector performs the following duties under the direction of the building official or the assistant building official:
  - (1) Examines plumbing, heating, refrigeration, ventilation and air conditioning construction documents;
  - (2) Inspects installations; and
  - (3) Enforces correction of violations of plumbing and heating codes at the scene of the installation by dealing directly with building owners, agents and contractors to assure compliance with applicable codes, referenced standards and other related regulations.
- (b) The minimum qualifications of a mechanical inspector are as follows:
  - (1) Completion of high school, vocational school or the equivalent;
  - (2) Possession of either a valid P - 1 "Unlimited Contractor" or P - 2 "Unlimited Journeyman" license and either a valid S-1 "Unlimited Contractor" or S-2 "Unlimited Journeyman" license;
  - (3) Maintenance or improvement of the applicable trade license issued pursuant to Chapter 390 of the Connecticut General Statutes during his or her tenure in the position; and
  - (4) Demonstration of the following:
    - (A) Thorough knowledge of materials and methods used in the installation of plumbing, heating, air conditioning and refrigeration installations;
    - (B) Thorough knowledge of the applicable plumbing and mechanical codes, referenced standards and other regulations;
    - (C) Ability to read and interpret plans and specifications;
    - (D) Ability to diagnose violations, hazards, and unsafe or unsanitary conditions caused by faulty materials or poor workmanship in new or existing mechanical installations;
    - (E) Ability to express oneself clearly and concisely, both orally and in writing.
- (c) Each Mechanical Inspector shall attend a minimum of thirty (30) hours of approved continuing education programs over consecutive three year periods.

**Sec. 29-262-8b. Electrical Inspector**

- (a) The electrical inspector performs the following duties under the direction of the building official or assistant building official:
  - (1) Examines electrical and telecommunications construction documents;
  - (2) Inspects installations; and
  - (3) Enforces the correction of violations of the electrical codes at the scene of the installation by dealing directly with building owners, agents, and contractors, to assure compliance with applicable codes, referenced standards and other related regulations.
- (b) The minimum qualifications of the electrical inspector are as follows:

- (1) Completion of high school, vocational school or the equivalent;
- (2) Possession of a valid E-1 "Unlimited Contractor" license or an E-2 "Unlimited Journeyman" license for not less than two (2) years;
- (3) Maintenance or improvement of the trade license issued pursuant to Chapter 390 of the Connecticut General Statutes during his or her tenure in the position; and
- (4) Demonstration of the following:
  - (A) Thorough knowledge of the methods, materials and techniques of the electrical trade;
  - (B) Thorough knowledge of applicable codes, referenced standards and other related regulations;
  - (C) Ability to diagnose violations, unsafe conditions and hazards in new and existing electrical installations;
  - (D) Ability to read and interpret plans and specifications; and
  - (E) Ability to express oneself clearly and concisely, both orally and in writing.
- (c) Each Electrical Inspector shall attend a minimum of thirty (30) hours of approved continuing education programs over consecutive three - year periods.

#### **Sec. 29 - 262 - 9b. Plumbing Inspector**

- (a) The plumbing inspector performs the following duties under the direction of the building official or assistant building official:
  - (1) Examines plumbing, piping and fire suppression system construction documents;
  - (2) Inspects installations; and
  - (3) Enforces the correction of violations at the scene of the installation, by dealing directly with building owners, agents and contractors to assure compliance with applicable codes, referenced standards and other related regulations.
- (b) The minimum qualifications of a plumbing inspector are as follows:
  - (1) Completion of high school, vocational school or the equivalent;
  - (2) Possession of a valid P - 1 "Unlimited Contractor" license or a P - 2 "Unlimited Journeyman" license for a minimum of two (2) years;
  - (3) Maintenance or improvement of the applicable trade license issued pursuant to Chapter 390 of the Connecticut General Statutes during his or her tenure in the position; and
  - (4) Demonstration of the following:
    - (A) Thorough knowledge of applicable codes, referenced standards and other related regulations;
    - (B) Thorough knowledge of methods, materials and techniques of plumbing installations;
    - (C) Ability to diagnose plumbing code violations, hazards, unsafe conditions and unsanitary conditions in new and existing plumbing installations;
    - (D) Ability to read and interpret plans and specifications; and
    - (E) Ability to express oneself clearly and concisely, both orally and in writing.
- (c) Each Plumbing Inspector shall attend a minimum of thirty (30) hours of approved continuing education programs over consecutive three - year periods.

#### **Sec. 29 - 262 - 10b. Heating and Cooling Inspector**

- (a) The heating and cooling inspector performs the following duties under the direction of the building official or the assistant building official:
  - (1) Examines heating, refrigeration, ventilation and air conditioning construction documents;
  - (2) Inspects installations;
  - (3) Enforces the correction of violations of the heating codes at the scene of the installation by dealing directly with building owners, agents and contractors to assure compliance with applicable codes, referenced standards and other related regulations.
- (b) The minimum qualifications of a heating and cooling inspector are as follows:
  - (1) Completion of high school, vocational school or the equivalent;
  - (2) Possession of a valid S - 1 "Unlimited Contractor" license or an S - 2 "Unlimited Journeyman" license for a minimum of two (2) years;
  - (3) Maintenance or improvement of the applicable trade license issued pursuant to Chapter 390 of the Connecticut General Statutes during his or her tenure in the position;

*(4) Demonstration of the following:*

- (A) Thorough knowledge of applicable codes, referenced standards and other related regulations;*
  - (B) Thorough knowledge of the methods and materials used in the installation of heating, refrigeration, ventilation and air conditioning systems;*
  - (C) Knowledge of steam fitting;*
  - (D) Ability to read and interpret plans and specifications;*
  - (E) Ability to diagnose violations, unsafe conditions, and hazards in new and existing heating and cooling installations;*
  - (F) Ability to express oneself clearly and concisely, both orally and in writing.*
- (c) Each Heating and Cooling Inspector shall attend a minimum of thirty (30) hours of approved continuing education programs over consecutive three - year periods.*

**Sec. 29 - 262 - 11b. Construction Inspector**

*(a) The construction inspector performs the following duties under the direction of the building official or the assistant building official:*

- (1) Examines documents of building construction, alteration or repair;*
  - (2) Inspects installations for compliance with applicable code requirements to ensure the safety of the occupants;*
  - (3) Investigates for compliance with structural safety requirements; and*
  - (4) Recommends to the building official corrective actions associated with the enforcement of unsafe conditions in new and existing installations, where warranted.*
- (b) The minimum qualifications of a construction inspector are as follows:*
- (1) Completion of high school, vocational school or the equivalent;*
  - (2) Possession of three (3) years of experience in building construction; and*
  - (3) Demonstration of the following:*
    - (A) Thorough knowledge of the materials, methods and techniques used in building construction;*
    - (B) Thorough knowledge of applicable codes, referenced standards and other related regulations;*
    - (C) Ability to read and interpret plans and specifications;*
    - (D) Ability to recognize faulty construction or hazardous and unsafe conditions in new and existing installations; and*
    - (E) Ability to express oneself clearly and concisely, both orally and in writing.*
- (c) Each Construction Inspector shall attend a minimum of thirty (30) hours of approved continuing education programs over consecutive three - year periods.*